

### ABSTRACT OF THE DISCLOSURE

A system performance prediction mechanism based on software component performance measurements. The system performance prediction of the present invention is performed in the following procedure: (1) determine operating conditions, under which individual software components operate, from the software components and requests constituting a processing content of the transaction to be processed by the system; (2) determine system resource utilizations by searching a performance database 10 using each software component and operating conditions as keys; (3) combine results of searching for the system resource utilizations of all software components involved in processing of a transaction important in the system performance and predict the system resource utilization of the transaction; and (4) predict a system resource utilization of the entire system by combining the results obtained in the above (3) and inputting them into a system performance prediction model.